

## REMARKS

The following remarks are provided in response to the final Office Action dated August 11, 2003 in which the Examiner:

- rejected claim 8 under 35 U.S.C. §132 because it introduced new matter into the disclosure of the invention;
- rejected claims 8-11 under 35 U.S.C. §112, first paragraph, as not reasonably conveying to one skilled in the art that the inventors, at the time the application was filed, had possession of the claimed invention;
- rejected claims 8-11 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to point out and distinctly claim the subject matter that the applicants regard as the invention;
- rejected claims 1-5, 7-12, 14-15 and 17 under 35 U.S.C. §102(b) as being anticipated by Bauer et al., "Hardware / Software Co-Simulation in a VHDL-based Test Bench Approach," Proceedings of the 34<sup>th</sup> Design Automation Conference, June 1997, pages 774-779 (hereinafter Bauer); and
- rejected claims 6 and 16 under 35 U.S.C. §103(a) as being unpatentable over Bauer in view of Rowson, "Hardware / Software Co-Simulation," Proceedings of the 31<sup>st</sup> ACM/IEEE Design Automation Conference, June 1994, pages 439-440 (hereinafter Rowson).

The applicants respectfully request reconsideration of the above referenced patent application in view of the amendments and remarks set forth herein, and respectfully request that the Examiner withdraw all rejections.

### **35 U.S.C. §132**

The Examiner rejected claim 8 under 35 U.S.C. §132 for introducing new matter into the disclosure of the invention. Where, as here, the applicants amended only claims, an objection under 35 U.S.C. §132 is improper. (See M.P.E.P. 706.03(o), Examiner Note 3). The applicants will respond with reference to the 35 U.S.C. §112, first paragraph rejection.

### **35 U.S.C. §112, first paragraph**

The Examiner rejected claims 8-11 under 35 U.S.C. §112, first paragraph, as not reasonably conveying to one skilled in the art that the inventors, at the time the application was filed, had possession of the claimed invention. For at least the foregoing reasons the applicants traverse the Examiner's rejection.

Presently amended independent claim 8 recites in part:

. . . requesting an access to the hardware model including a CPU bus functional model from a hardware component to a software component coupled to a CPU server over a network

The applicants respectfully assert that page 18, lines 1-2 of the as-filed specification support the amendment, and request that the Examiner allow claim 8. As claims 9-11 depend from allowable claim 8, the applicants further request that the Examiner allow dependent claims 9-11.

### **35 U.S.C. §112, second paragraph**

The Examiner rejected claims 8-11 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to point out and distinctly claim the subject matter that the

applicants regard as the invention. For at least the foregoing reasons the applicants traverse the Examiner's rejection.

Presently amended independent claim 8 recites in part:

. . . sending an access request from the CPU bus functional model to the CPU server over the network;

The applicants assert that the "CPU bus functional model" limitation has sufficient antecedent basis in presently amended independent claim 8 and respectfully request that the Examiner allow claim 8. As claims 9-11 depend from allowable claim 8, the applicants further request that the Examiner allow dependent claims 9-11

### **35 U.S.C. §102(b)**

The Examiner rejected claims 1-5, 7-12, 14-15 and 17 under 35 U.S.C. §102(b) as being anticipated by Bauer. For at least the foregoing reasons the applicants traverse the Examiner's rejection.

To establish a *prima facie* case of anticipation under 35 U.S.C. §102, the Examiner must supply a single prior art document that alone teaches ". . . **every** aspect of the claimed invention either explicitly or impliedly." (emphasis added) (See M.P.E.P. §706.02) If the Examiner cannot show that the single prior art document asserts each and every element and limitation of the applicants' claims, then the Examiner has failed to establish a *prima facie* case of anticipation for that claim. To overcome the Examiner's anticipation rejection, the applicant must only demonstrate that the cited prior art document fails to teach one element or limitation present in the claim.

Presently amended independent claim 1 recites in part:

. . . receiving real working environment test inputs for the co-simulation.

Presently amended independent claim 8 is a method claim that recites a similar limitation. Presently amended independent claim 12 is an apparatus claim that recites a similar limitation.

The Examiner agrees that Bauer fails to expressly disclose receiving test inputs for the co-simulation from a real working environment. Accordingly, as the applicants have demonstrated that independent claims 1, 8, and 12 contain a limitation or element not taught by Bauer, the applicants respectfully request that the Examiner allow independent claims 1, 8, and 12. The applicants further request that the Examiner allow dependent claims 2-5, 7, 9-11, 14-15, and 17 as depending from allowable independent claims.

### **35 U.S.C. §103(a)**

The Examiner rejected claims 6 and 16 under 35 U.S.C. §103(a) as being unpatentable over Bauer in view of Rowson. For at least the foregoing reasons the applicants traverse the Examiner's rejection.

A *prima facie* case of obviousness under 35 U.S.C. §103 requires, among other criteria, that “. . . the prior art reference (or references when combined) must teach or suggest **all** the claim limitations.” (emphasis added) (See M.P.E.P. 706.02(j) and 2143.03). To overcome a §103(a) rejection, the applicants must only demonstrate that the cited prior art document or documents fail individually and in combination to teach or suggest one element or limitation present in the claim.

Presently amended independent claims 1 and 8 have been amended to incorporate an element of canceled dependent claim 6. Presently amended independent claim 12 has

been amended to incorporate an element of canceled dependent claim 16. As such, the following remarks respond to the Examiner's §103(a) rejection with reference to independent claims 1, 8, and 12.

Rowson page 440, column 1, paragraph 2 describes that “[h]ardware modelers use an actual part as the model, called by the simulator.” The remainder of the paragraph discloses the functionality and implementation of hardware modelers. The Examiner claims that it would have been obvious to one skilled in the art at the time the invention was made to modify the teachings of Bauer to receive inputs through real hardware ports. The applicants respectfully assert that “real working environment” as recited by claims 1, 8, and 12 describes the source of the test inputs for the co-simulation and not the nature of the hardware model or hardware modeler ports as the Examiner suggests. Rowson discloses no such limitation as it only provides that the hardware model itself, and not the inputs thereto, may be actual parts or real-world systems.

Having demonstrated that Bauer and Rowson individually and in combination fail to teach or suggest all claim limitations in presently amended independent claims 1, 8, and 12, the applicants respectfully assert that claims 1, 8, and 12 are patentable over Bauer in view of Rowson. As dependent claims 2-5, 7, 9-11, 14-15, and 17 depend from nonobvious independent claims, the dependent claims are also nonobvious. (See M.P.E.P. §2143.03 (citing In re Fine, 5 U.S.P.Q.2d (BNA) 1596 (Fed. Cir. 1988))).

### CONCLUSION

For at least the foregoing reasons, the applicants submit that they have overcome the Examiner's rejections and that they have the right to claim the invention as set forth in the listed claims.

Please charge any shortages and credit any overcharges to our Deposit Account number 02-2666.

Respectfully submitted,

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Oct 13, 2003  
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